

What Is Claimed Is:

1. An organic electroluminescent display device, comprising:
 - first and second substrates facing and spaced apart from each other, the first and second substrates having a plurality of sub-pixel regions;
 - a thin film transistor provided at each of the plurality of sub-pixel regions on an inner surface of the first substrate;
 - a first electrode on an inner surface of the second substrate;
 - an organic electroluminescent layer on the first electrode;
 - a second electrode on the organic electroluminescent layer at each of the plurality of sub-pixel regions; and
 - a connection pattern contacting the thin film transistor and the second electrode,

wherein a melting temperature of the connection pattern is lower than a melting temperature of the second electrode.
2. The device according to claim 1, wherein the connection pattern has a first portion contacting the second electrode and a second portion adjacent to the first portion such that a cross sectional area of the first portion is larger than a cross sectional area of the second portion.

3. The device according to claim 1, wherein the first electrode includes transparent material.
4. The device according to claim 1, further comprising an island-shaped buffer pattern between the connection pattern and the first substrate.
5. The device according to claim 4, wherein the buffer pattern has a hemispheric shape.
6. The device according to claim 4, wherein the buffer pattern includes one of photoresist, photo-acryl, and polyimide materials.
7. The device according to claim 1, wherein the connection electrode includes at least one of gallium indium (GaIn) alloy, lead tin (PbSn) alloy, lead tin silver (PbSnAg) alloy, tin indium (SnIn) alloy, tin indium copper (SnInCu) alloy, and tin indium silver (SnInAg) alloy.
8. The device according to claim 1, wherein the thin film transistor includes a semiconductor layer, a gate electrode, and source and drain electrodes such that the connection pattern contacts the drain electrode.

9. A method of fabricating an organic electroluminescent display device, comprising:

forming a thin film transistor on a first substrate having a plurality of sub-pixel regions, the thin film transistor corresponding to each of the plurality of sub-pixel regions;

forming a passivation layer on the thin film transistor, the passivation layer having a contact hole exposing the thin film transistor;

forming a connection pattern on the passivation layer, the connection pattern contacting the thin film transistor through the contact hole;

forming a first electrode on a second substrate having the plurality of sub-pixel regions;

forming an organic electroluminescent layer on the first electrode;

forming a second electrode on the organic electroluminescent layer, the second electrode corresponding to each of the plurality of sub-pixel regions; and

attaching the first and second substrates such that the connection pattern contacts the second electrode,

wherein a melting temperature of the connection pattern is lower than a melting temperature of the second electrode.

10. The method according to claim 9, further comprising forming a seal pattern between the first and second substrates.
11. The method according to claim 9, wherein the connection pattern contacts the second electrode by welding.
12. The method according to claim 11, wherein the welding is performed under vacuum.
13. The method according to claim 11, wherein the first substrate is heated to a temperature within about 100 °C to about 160 °C during the welding.
14. The method according to claim 11, wherein the first and second substrates are pressurized during the welding.
15. The method according to claim 11, wherein the connection pattern has a first portion contacting the second electrode and a second portion adjacent to the first portion such that a cross sectional area of the first portion is larger than a cross sectional area of the second portion.

16. The method according to claim 9, further comprising forming an island-shaped buffer pattern between the passivation layer and the connection pattern.

17. The method according to claim 16, wherein the buffer pattern has a hemispheric shape.

18. The method according to claim 16, wherein the buffer pattern includes one of photoresist, photo-acryl, and polyimide materials.

19. The method according to claim 9, wherein the connection electrode includes at least one of gallium indium (GaIn) alloy, lead tin (PbSn) alloy, lead tin silver (PbSnAg) alloy, tin indium (SnIn) alloy, tin indium copper (SnInCu) alloy, and tin indium silver (SnInAg) alloy.

20. The method according to claim 9, wherein the connection pattern contacts the second electrode by surface tension and diffusion.

21. A method of fabricating an organic electroluminescent display device, comprising:

forming a thin film transistor on a first substrate having a plurality of sub-pixel regions;

forming a passivation layer on the thin film transistor having a contact hole exposing the thin film transistor;

forming a connection pattern on the passivation layer to contact the thin film transistor through the contact hole;

forming a first electrode on a second substrate having the plurality of sub-pixel regions;

forming an organic electroluminescent layer on the first electrode;

forming a second electrode on the organic electroluminescent layer; and

attaching the first and second substrates such that the connection pattern melts at a first temperature and contacts the second electrode.

22. The method according to claim 21, further comprising forming a seal pattern between the first and second substrates.

23. The method according to claim 21, wherein the connection pattern contacts the second electrode by welding.

24. The method according to claim 23, wherein the welding is performed under vacuum.
25. The method according to claim 23, wherein the first substrate is heated to a temperature within about 100 °C to about 160 °C during the welding.
26. The method according to claim 23, wherein the first and second substrates are pressurized during the welding.
27. The method according to claim 23, wherein the connection pattern has a first portion contacting the second electrode and a second portion adjacent to the first portion such that a cross sectional area of the first portion is larger than a cross sectional area of the second portion.
28. The method according to claim 21, further comprising forming an island-shaped buffer pattern between the passivation layer and the connection pattern.
29. The method according to claim 28, wherein the buffer pattern has a hemispheric shape.

30. The method according to claim 28, wherein the buffer pattern includes one of photoresist, photo-acryl, and polyimide materials.
31. The method according to claim 21, wherein the connection electrode includes at least one of gallium indium (GaIn) alloy, lead tin (PbSn) alloy, lead tin silver (PbSnAg) alloy, tin indium (SnIn) alloy, tin indium copper (SnInCu) alloy, and tin indium silver (SnInAg) alloy.
32. The method according to claim 21, wherein the connection pattern contacts the second electrode by surface tension and diffusion.